

Equally expressed in both tissues
Expressed higher in stem than in leaf

Expressed higher in leaf than in stem

Stem-Regulated, Plant Defense Promoter and Uses Thereof in Tissue-Specific Expression in Monocots
Inventors: T. Erik Mirkov, et al.
Attorney Docket 017575.0774
Page 7 of 23 - Figure 5

Scatter Plot representation of RNA expression levels Ratio of intensity medians= 1 **Constitutive Gene Greater than 2- fold** upregulated genes 10= 100 1000 00001 0.1 fluorescence intensity (stem)

0.0

Cy3 fluorescence intensity (leaf)

0.01

0.8

4.0

3.0

Jiem-keguinieu, riant Degense rromoter unu Uses Thereof in Tissue-Specific Expression in Monocots
Inventoris: T. Erik Mirkov, et al.
Attorney Docket 017575.0774
Page 8 of 23 - Figure 6

Scatter Plot representation of RNA expression levels Ratio of intensity medians= 1 **Constitutive Gene Greater than 2- fold** upregulated genes 10= 100 0001 0.1 fluorescence intensity (stem)

0.0

Trust

Cy3 fluorescence intensity (leaf)

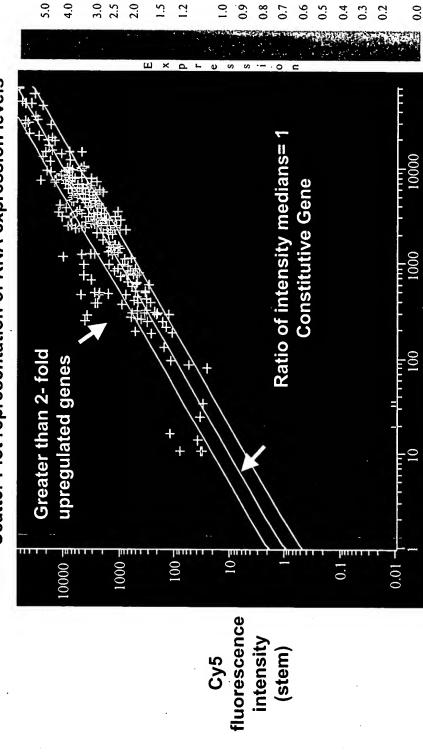
1000

9.0

3.0

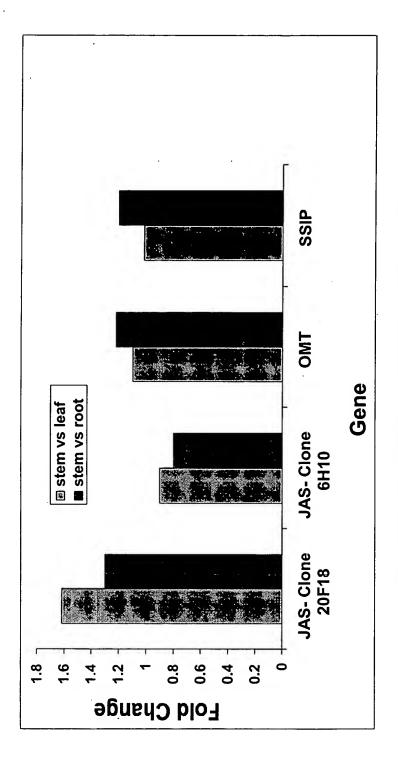
Stem-Keguiatea, Flant Defense Promoter und Monocots
Inventors: T. Erik Mirkov, et al.
Attorney Docket 017575.0774
Page 9 of 23 - Figure 6

Scatter Plot representation of RNA expression levels



Cy3 fluorescence intensity (leaf)

Stem-regulated, viant Degense vromoter and Uses Thereof in Pissue-Specific Expression in Monocots
Inventors: T. Erik Mirkov, et al. Attorney Docket 017575.0774
Page 10 of 23 - Figure 6



Stein-Keguiatea, Fiant Desense Fromoter unu.
Uses Thereof in Tissue-Specific Expression in
Monocots
Inventors: T. Erik Mirkov, et al.
Attorney Docket 017575.0774
Page 11 of 23 - Figure 7

Real-time RT-PCR quantitations (Ct values) are normalized to the endogenous control ubiquitin (constitutive gene)

FIGURE 8

Root

Leaf

Stem

Jasmonate-induced protein (JAS)- Clone 20F18

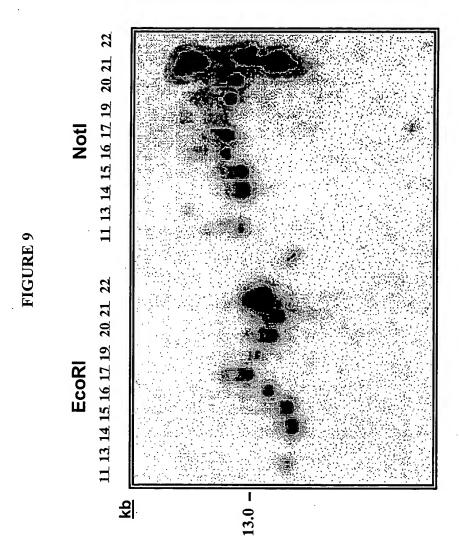
O-methyl transferase (OMT)

Salt-stress induced protein (SSIP)

Ubiquitin (constitutive gene)

Phosphophoimages of RNA blots (12 μg RNA per lane)

Stem-regulatea, runt Degense rromoter unu Uses Thereof in Tissue-Specific Expression iin Monocots
Inventors: T. Erik Mirkov, et al.
Attorney Docket 017575.0774
Page 12 of 23 - Figure 8

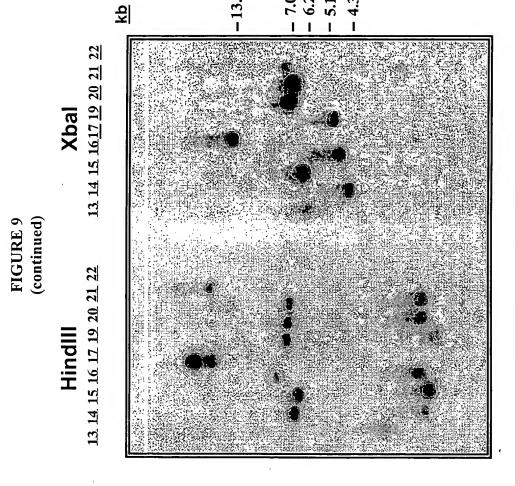


OMT full-length cDNA probe

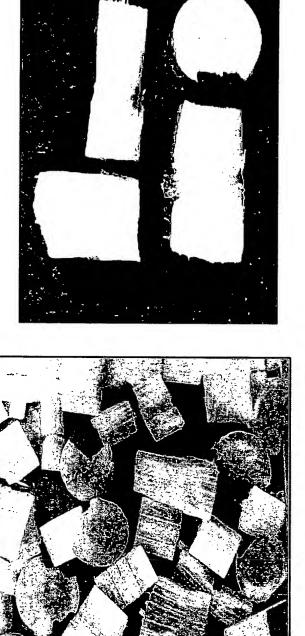
Stem-Regulated, Plant Defense Promoter and Uses Thereof in Tissue-Specific Expression in Monocots
Inventors: T. Erik Mirkov, et al.
Attorney Docket 017575.0774
Page 13 of 23 - Figure 9

Uses Thereof in Tissue-Specific Expression in Monocots
Inventors: T. Erik Mirkov, et al.
Attorney Docket 017575.0774
Page 14 of 23 - Figure 9 (continued)

Stem-Kegulated, Plant Defense Promoter and



OMT full-length cDNA probe

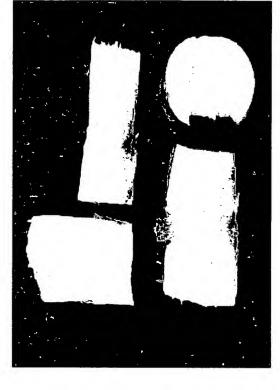


Attorney Docket 017575.0774
Page 15 of 23 - Figure 10 Uses Thereof in Tissue-Specific Expression in Monocois
Inventors: T. Erik Mirkov, et al.

FIGURE 10

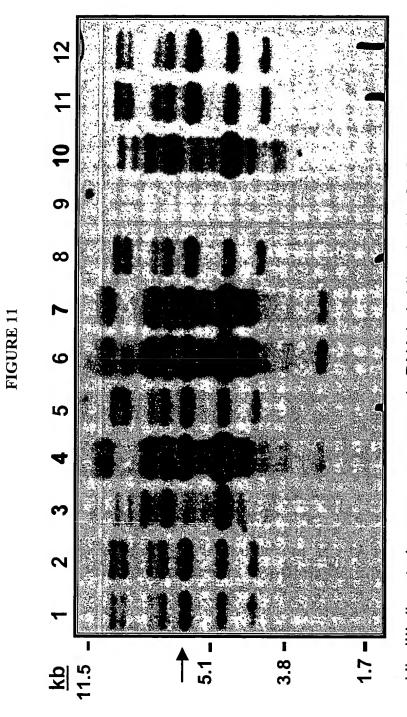


Stem-Kegulated, Plant Desense Promoter and Uses Thereof in Tissue-Specific Expression in Monocots Inventors: T. Erik Mirkov, et al. Attorney Docket 017575.0774
Page 16 of 23 - Figure 10



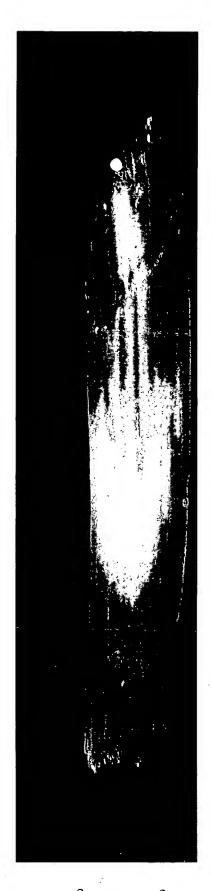


Stem-regulation, Funn Degense Fromotei und Uses Thereof in Tissue-Specific Expression in Monocots
Inventors: T. Erik Mirkov, et al.
Attorney Docket 017575.0774
Page 17 of 23 - Figure 10

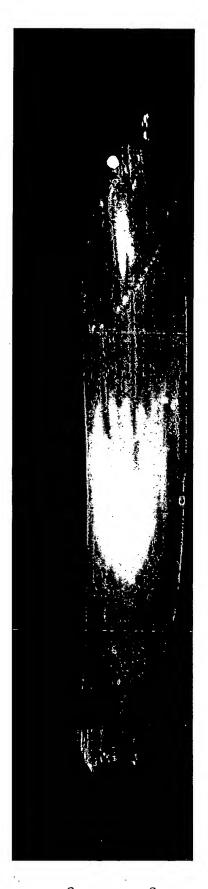


HindIII digested sugarcane genomic DNA hybridized with GUS gene probe. Lanes 1, 2, 5, 8, 11 & 12: One positive transformation event; Lanes 4, 6 & 7: Another positive event; Lanes 3 & 10: A negative event

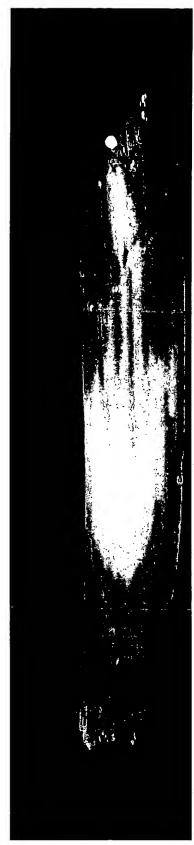
Stem-Kegulatea, Flant Desense Promoter and Uses Thereof in Tissue-Specific Expression in Monocots
Inventors: T. Erik Mirkov, et al.
Attorney Docket 017575.0774
Page 18 of 23 - Figure 11



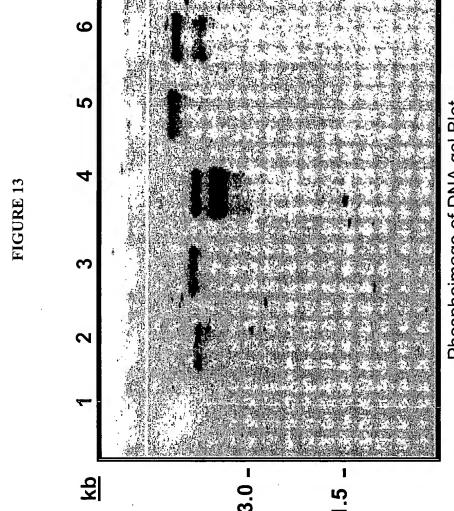
Jiem-Kegulateu, Plant Desense Promoter and Uses Thereof in Tissue-Specific Expression in Monocots
Inventors: T. Erik Mirkov, et al. Attorney Docket 017575.0774
Page 19 of 23 - Figure 12



Stem-Keguiatea, Viant Desense vromoter ana Uses Thereof in Tissue-Specific Expression in Monocots
Inventors: T. Erik Mirkov, et al.
Attorney Docket 017575.0774
Page 20 of 23 - Figure 12



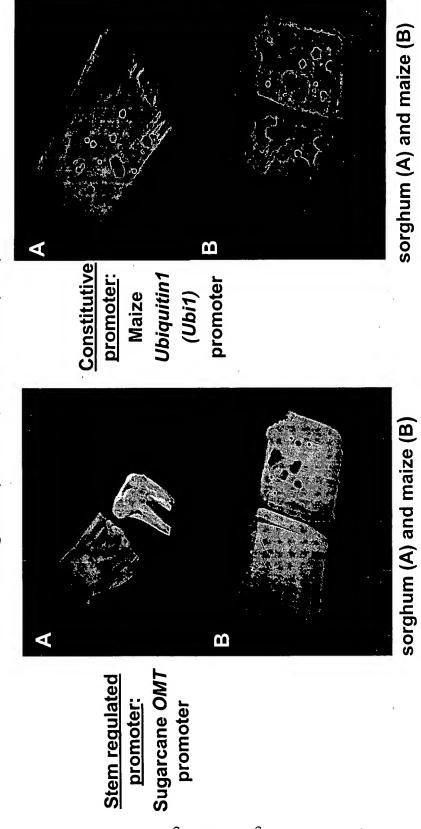
Stem-keguunteu, runn Degense rromoten um Uses Thereof in Tissue-Specific Expression in Monocots
Inventors: T. Erik Mirkov, et al.
Attorney Docket 017575.0774
Page 21 of 23 - Figure 12



HindIII digested rice genomic DNA hybridized to hygromycin gene probe. 3, 4 & 5: 3 independent pOMT1::GUS lines; <u>Lane 6</u>: one pOMT2::GUS line. Phosphoimage of DNA gel Blot Lane 1: Untransformed plant; Lanes 2,

Stem-Regulated, Plant Desense Promoter and Uses Thereos in Tissue-Specific Expression in Monocots Inventors: T. Erik Mirkov, et al. Attorney Docket 017575.0774
Page 22 of 23 - Figure 13

sorghum (RPx430) and maize (B73) stem cells



Stem-Regulated, Plant Defense Promoter and Uses Thereof in Tissue-Specific Expression in Monocots
Inventors: T. Erik Mirkov, et al. Attorney Docket 017575.0774

Attorney Docket 0121-14